CLAIMS

What is claimed is:

1. An optomechanical switch for transmitting an optical beam comprising:

a substrate;

a signal source capable of transmitting a radiation signal; and

a LMLC on said substrate positionable between a first position and a second position upon activation with said signal source.

2. The optomechanical switch of claim 1 wherein

said first position is a transmissive state for transmission of said optical beam.

3. The optomechanical switch of claim 2 wherein

said second position is a reflective state for reflection of said optical beam.

4. The optomechanical switch of claim 1 wherein said substrate is silicon.

5. The optomechanical switch of claim 1 wherein said substrate is silicon on insulator.

6. The optomechanical switch of claim 1 wherein said substrate is a multi layer substrate.

7. The optomechanical switch of claim 1 wherein said signal source is a laser.

8. The optomechanical switch of claim 1 wherein said signal source is a light source.

9. The optomechanical switch of claim 1 further comprising:

a micromirror disposed perpendicularly to the plane of said LMLC.

10. The optomechanical switch of claim 9 wherein said micromirror is hinged to said LMLC.

11. The optomechanical switch of claim 10 wherein said hinge is made of LMLCs.

12. The optomechanical switch of claim 1 wherein said LMLC is rotatably disposed with respect to said substrate.